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MEMORANDUM

TO: Chris Lichens, Remedial Project Manager
Site Cleanup Section 4, SFD-7-4

THROUGH: Rose Fong, ESAT Task Order Manager (TOM) RF
Quality Assurance (QA) Program, MTS-3

FROM: Doug Lindelof, Data Review Task Manager
Region 9 Environmental Services Assistance Team (ESAT)

ESAT Contract No.: EP-W-06-041
Technical Direction Form No.: 00105042 Amendment 5

DATE: August 14, 2007

SUBJECT: Review of Analytical Data, Tier 2

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

Site:	Cenco Refinery Omega Chem
Site Account No.:	09 BC LA02
CERCLIS ID No.:	CAD042245001
Case No.:	335392.FI.01
SDG No.:	IPK0785
Laboratory:	TestAmerica Analytical Testing Corp.
Analysis:	Hexavalent Chromium
Samples:	3 Water Samples (see Case Summary)
Collection Dates:	November 7, 2006
Reviewer:	Stan Kott, ESAT/Laboratory Data Consultants

This report has been reviewed by the EPA TOM for the ESAT contract, whose signature appears above.

If there are any questions, please contact Rose Fong (QA Program/EPA) at (415) 972-3812.

Attachment

SAMPLING ISSUES: [X] Yes [ ] No

Data Validation Report

Case No.: 335392.FI.01
SDG No.: IPK0785
Site: Cenco Refinery Omega Chem
Laboratory: TestAmerica Analytical Testing Corp.
Reviewer: Stan Kott, ESAT/LDC
Date: August 14, 2007

I. CASE SUMMARY

Sample Information

Samples:	OC2-MW606-W-O-264, OC2-MW605-W-O-265, and OC2-MW603-W-O-266
Concentration and Matrix:	Low Concentration Water
Analysis:	Hexavalent Chromium
SOW:	EPA Method 218.6
Collection Date:	November 7, 2006
Sample Receipt Date:	November 7, 2006
Preparation Date:	November 7, 2006
Analysis Date:	November 7, 2006

Field QC

Field Blanks (FB):	Not Provided
Equipment Blanks (EB):	Not Provided
Background Samples (BG):	Not Provided
Field Duplicates (D1):	Not Provided

Laboratory QC

Method Blanks:	MBLK
Associated Samples:	Samples listed above
Matrix Spike:	IPK0744-06MS1
Matrix Spike Duplicate:	IPK0744-06MSD1

Analysis: Hexavalent Chromium

Analyte	Sample Preparation Date	Analysis Date
Hexavalent Chromium	November 7, 2006	November 7, 2006

Sampling Issues

The Chain of Custody (COC) record form did not specify a sample to be used for laboratory quality control (QC). As a result, the laboratory selected sample IPK0744-06, which may not be representative of the environmental sample matrix. The effect on data quality is not known.

Additional Comments

As directed by the TOM, a Tier 2 validation (i.e., review all QC results and calibrations, minus calculation check) was performed.

The IPK0785.cvs laboratory data file was converted into Excel format and labeled "IPK0785 Reviewed.xls" to provide data review comments. Reviewer comments are highlighted in the attached table.

The laboratory reports results less than the method detection limit (MDL) as "ND". This was changed in the table to 0.0003U to reflect not detected at the laboratory reporting limit (RL). The changes are highlighted in the attached table.

Definitions of data qualifiers are listed in Table 1B.

This report was prepared in accordance with the following documents:

- Region 9 Standard Operating Procedure 906, *Guidelines for Data Review of Contract Laboratory Program Analytical Services (CLPAS) Inorganic Data Packages*;
- *Methods For The Determination Of Metals In Environmental Samples*, EPA-600/4-91-010, June 1991; and
- *USEPA Method 218.6, Determination of Dissolved Hexavalent Chromium in Drinking Water, Groundwater, and Industrial Wastewater Effluents by Ion Chromatography*, Revision 3.3, May 1994.

II. VALIDATION SUMMARY

The data were evaluated based on the following parameters:

	Parameter	Acceptable	Comment
1.	Data Completeness	Yes	
2.	Sample Preservation and Holding Times	Yes	
3.	Calibration	No	A
	a. Initial		
	b. Initial and Continuing Calibration Verification		
4.	Blanks	Yes	
5.	Laboratory Control Sample (LCS)	Yes	
6.	Duplicate Sample Analysis	Yes	
7.	Matrix Spike Sample Analysis	Yes	
8.	Field Duplicate Sample Analysis	N/A	
9.	Sample Quantitation	Yes	
10.	Overall Assessment	Yes	

N/A = Not Applicable

III. VALIDITY AND COMMENTS

A. The following results are flagged "J" or "UJ" because the final continuing calibration verification (CCV) standard result is outside method QC limits.

- Hexavalent chromium in all samples

The final CCV recovery result for hexavalent chromium does not meet the 95-105% criterion for accuracy specified in the method. The recovery for hexavalent chromium is presented below and is based on an ideal recovery of 100%.

Analyte	% Recovery
Hexavalent Chromium (CCV)	94

Since CCV was not reanalyzed as required by the method, results greater than or equal to the reporting limit (RL) are considered quantitatively uncertain. The results reported for hexavalent chromium in all samples may be biased low and false negatives may exist.

The inorganic method indicates that the laboratory verify that the instrument is properly calibrated on a continuing basis. Laboratory reagent blank (LRB) and laboratory performance check standards (LPC) are analyzed after every 10 analytical samples to determine the validity of the calibration.

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR INORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared in accordance with the document *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004.

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Case No.: 335392.FI.01
SDG No.: IPK0785
Site: Cenco Refinery Omega Chem

SDG	FieldID	LabSampleID	SampleDate	Analyte	Result	Validity	Comment	MDL	RL	Units
IPK0785	OC2-MW606-W-0-264	IPK0785-01	11/7/2006	Chromium	0.0031	J	A	0.0002	0.0003	MG/L
IPK0785	OC2-MW605-W-0-265	IPK0785-02	11/7/2006	Chromium	0.0003U	J	A	0.0002	0.0003	MG/L
IPK0785	OC2-MW603-W-0-266	IPK0785-03	11/7/2006	Chromium	0.0003U	J	A	0.0002	0.0003	MG/L
IPK0785	6K07100-BLK1	6K07100-BLK1		Chromium	0.0002			0.0002	0.0003	MG/L
IPK0785	6K07100-BS1	6K07100-BS1		Chromium	0.0489			0.0002	0.0003	MG/L
IPK0785	6K07100-MS1	6K07100-MS1		Chromium	0.106			0.001	0.0015	MG/L
IPK0785	6K07100-MSD1	6K07100-MSD1		Chromium	0.107			0.001	0.0015	MG/L